



# **Intel® S845WD1-E Server Board Troubleshooting Guide**

**A Guide for Technically Qualified Assemblers of Intel®  
Identified Subassemblies/Products**

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Revision History		
Date	Rev	Modifications
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# S845WD1-E Troubleshooting

Welcome to the S845WD1-E server platform. In the unlikely event you do encounter issues, this guide will help you troubleshoot & identify possible problem areas. If you are unable to resolve a problem using this guide, please call our help desk. This guide will help you collect the data we will need to help you through your issues. Each issue includes suggestions that may help you, and a list of information we will need to assist you should you need to call. Please visit the Intel support website for updated versions of this document: <http://support.intel.com/support/motherboard/server/s845wd1-e>.

# Boot Issues

## 1) My server will not power on.

Check for the following possibilities:

- The Server Board S845WD1-E has specific requirements for the power sequencing and limits. A momentary switch should be used for the power on/off switch. The power supply used must be either ATX12V or EPS12V design, otherwise the S845WD1-E server board will not operate. These power supplies provide the additional 4-pin (or 8-pin) +12 volt connector. If the power supply 2-by-2 (or 2-by-4) connector is not plugged into the board connector located near the processor socket, the system will not boot. Does your power supply meet these criteria?
- Have you securely plugged the server AC power cord into the power supply?
- Have you plugged the server into a “powered on” power strip?
- Some ATX power supplies have a power switch on the back of the power supply next to the fan, is it switched on?
- Is the power supply set correctly to 110V or 235V depending on your power output?
- Is the front panel cable properly connected to the front panel header pins on the server board located at J8H4?
- Remove all add-in cards and see if the server boots using just the on-board components. If successful, add the cards back in one at a time with a reboot in between to see if you can pinpoint a suspect card.
- Remove the processor and reseal it.
- Remove and reseal the memory modules. Try using memory modules from a known working server system.

Though it is unlikely that a server will not boot, there are many reasons why it may not boot. If you are unable to resolve this issue, please fill out the included customer support form and call your customer support representative. Please note the answers to the following questions below.

- What memory is the server using? Is it on the tested memory list? Visit the Intel support site for an updated memory list at <http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).
- What chassis and power supply is the server using?
- If you are using a chassis with front panel lights, are there any front panel lights on?
- Is the power supply fan spinning?
- Does the system beep? See Issue 2.
- Please note what is displayed on the monitor or any sounds emanating from the server system.
- If the server will still not boot, please fill in the issue report form at the end of this document & contact your Intel customer support representative.

## 2) Upon booting, my server starts beeping.

Most likely, these beeps are “beep codes.” They identify system events in case video fails to display. The following gives a description of possible beep codes for this board.

**Table 3. Beep Codes**

Beep	Description
1	Refresh failure
2	Parity cannot be reset
3	First 64 KB memory failure
4	Timer not operational
5	Not used
6	8042 GateA20 cannot be toggled
7	Exception interrupt error
8	Display memory R/W error
9	Not used
10	CMOS Shutdown register test error
11	Invalid BIOS (e.g., POST module not found, etc.)

## 3) My HDD lights went on, I heard the drives spin up, and my floppy drive light turned on, but I’m not seeing video.

Check the following:

- Make sure the monitor is turned on and the video cable is plugged in completely.
- Remove all add-in cards and retry booting with just the on-board components. If successful, try adding the add-in Board one at a time with a reboot in between to try to pinpoint a suspect card.
- Remove and reseat memory modules. Try using memory from a known working system.
- Remove and reseat processor.
- If you are using a switch box to share a monitor between multiple servers, ensure switching to the proper server.

If you are unable to get a video image, please fill out the included customer support form and call your customer support representative. Please note the answers to the following questions below.

- What memory is the system using? Is it on the tested memory list? Visit the Intel support site for an updated memory list at <http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).
- What chassis and power supply is the system using?
- If the chassis has front panel lights, are any front panel lights on?
- Is the power supply fan spinning?
- Does the system beep? See Issue 2.
- Please note any sounds emanating from the server system.
- If you are using a third party video adapter, please have manufacturer and model number ready.
- If the server will still not boot, please fill in the issue report form at the end of this document & contact your Intel customer support representative.

#### **4) I am installing adapters in my powered-down system, and my system boots up when I install a PCI adapter.**

Server management features require full time “standby” power. This means that power is still “on” to parts of the system even if you have turned the system “off” via the power switch on the front panel.

Additionally, signals in the PCI connectors tell the system to boot (normally used by server management adapters/NICs). Plugging in the adapter with the AC power cord still connected can cause false signals to be transmitted commanding the system to boot. Before removing the cover to your chassis, you should always

- Turn off the server via the power switch on the front panel.
- Unplug the AC cord from the back.

#### **5) My system boots up automatically when I power on my power strip.**

Some server systems save the “last known power state” since the last AC power connection. If you remove AC power before powering down the system via the power switch on the front panel, your system may automatically attempt to come back to the “on” state it was in once you restore AC power.

- Please keep in mind that unplugging the system or flipping a switch on the power strip both remove AC power.
- Follow the correct A/C removal sequence: Press the front panel button, and then remove the A/C power cord.

Allowing your system to fully power up and then power down the system using the front panel power switch should correct this problem. If it does not, fill out the attached issue report form and call your customer support representative. Please have the following information available:

- What BIOS do you have loaded on the system? (The latest tested BIOS is posted to the Intel Support Website at <http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).
- What is the AA number of the server board? (The AA number is located on a white label near the edge of the board and is printed in the following format: AA xxxxxx-xxx)
- What memory is the server using? Is it on the tested memory list? Visit the Intel support site for an updated memory list at <http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).
- What chassis and power supply is the system using?

#### **6) Some of my hard drives show up during post and some don't.**

Check on the following:

- Are you using third party SCSI adapters? System memory limitations limit the number & size of option ROMs in the system. If you place too many adapters or adapters that take up too much space in memory, they may not install and show the hard drives connected to them.
- Verify that pin 1 on the data cable connects to pin 1 on the device. In most cases, if you orient the data cable so that the colored stripe on the cable is pointing towards the power connector on the device, you will have proper orientation.
- Verify that the device power cable is firmly connected.
- Check your SCSI ID numbers. SCSI devices must have their own unique ID on the SCSI bus. This number must be set with jumpers on the device. ID number should be set starting at 0 and must be set lower than 8 if booting from the drive.
- Check for proper termination on the SCSI bus.

If your hard drives still do not show, please fill out the included issue report form and call your customer support representative. Please pay special attention to the following information:

- What add-in adapters do you have in your system (manufacturer and model number)?
- What types of hard drives are in the system (manufacturer and model number)?
- What kind of terminator do you have at the end of the cable? (Manufacturer and type e.g. Ultra 160)
- What are the SCSI IDs of the devices on your SCSI bus?
- How many SCSI channels are you using?
- What memory is the system using? Is it on the tested memory list? Visit the Intel support site for an updated memory list at <http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).



# Other Questions

## General Questions

- 1) What processor does the Intel® Server Board S845WD1-E support?  
The Intel S845WD1-E server board supports a single Pentium 4 or Celeron processor (in a  $\mu$ PGA478 socket) with a system bus of 400 /533 MHz. At the time of launch, the Server Board S845WD1-E will support 1.8 GHz to 2.53 GHz. For the latest supported speeds, please refer to the Intel support website at <http://support.intel.com/support/motherboards/server/s845wd1-e> for more information (site available at S845WD1-E launch).
- 2) How do I install and secure a processor on the S845WD1-E server board?  
The processor connects to the server board S845WD1-E through the  $\mu$ PGA478 pin socket connector. Make sure you use an adequate heat sink solution such as that provided with the Branded Intel® Pentium® 4 Processor. If you are integrating the S845WD1-E server board into a 1U chassis, you will need to use the 1U active heatsink that is provided in the S845WD11U boxed board.
- 3) How many expansion slots does the Server Board S845WD1-E contain?  
The Server Board S845WD1-E has three dedicated PCI connectors and one 1.5V only AGP 4x port connector. All PCI slots support bus-mastering devices.
- 4) Does the Server Board S845WD1-E support STR (Suspend-to-RAM)?  
The Server Board S845WD1-E supports STR when used with STR capable: Operating system, add-in card(s), driver(s), and application(s). Operating systems, add-in cards, drivers, and applications that do not support STR can cause problems when coming out of different sleep states.

## Memory Questions

- 1) What memory configurations are supported on the Server Board S845WD1-E?  
The Server Board S845WD1-E supports DDR 200 and DDR 266 SDRAM Memory. There are two DIMM sockets supporting up to two 184-pin DDR SDRAM Dual Inline Memory Modules (DIMMs) with gold-plated contacts. The Server Board S845WD1-E is designed to support a memory range of 64 MB minimum (using 64 Mbit technology) up to 2.0 GB maximum\*\* [See note below] (using 512 Mbit technology) that conforms to the latest Intel JEDEC specification Addendums. The Server Board S845WD1-E can support ECC and non-ECC DIMMs.  
**NOTE:** The Server Board S845WD1-E has been designed to support DIMMs based on 512 Mbit technology for a maximum onboard capacity of up to 2.0 GB, but this technology has not been validated (currently validated up to 1.0 GB using 256 Mbit technology) on this board. Please refer to the Intel support website at <http://support.intel.com/support/motherboards/server/s845wd1-e> for additional information (site available at S845WD1-E launch).
- 2) What kind of problems might occur in a DDR SDRAM-based system that uses non-compliant DIMMs?

The most extreme example of memory failure is when the system hangs while booting the operating system. This can happen when the system is unable to communicate properly with the memory. In less extreme cases, the memory may generate intermittent errors or fail during stress.

- a. I get a repeating-beep error code and my Server board does not boot or show any video. What does this mean?

This beep code may indicate a problem during detection of the DDR SDRAM memory device. Check to ensure that system memory is properly installed and that the DIMMs are on the S845WD1-E Server board tested-memory list at

<http://support.intel.com/support/motherboards/server/s845wd1-e> (site available at S845WD1-E launch).

### Instantly Available PC and Power Supplies:

- What kind of power supply do I need for the Intel® Server Board S845WD1-E?  
The power supply used must be either ATX12V or EPS12V design, otherwise the S845WD1-E server board will not operate. These power supplies provide the additional 4-pin (or 8-pin) +12 volt connector. The 4-pin (or 8-pin) +12V power connector has been added to enable the delivery of more +12VDC current to the server board. This connector is used by the board to power the processor's voltage regulator module (VRM).  
**CAUTION: The system will not boot if there is failure to use an ATX12V or EPS12V power supply, or by not connecting additional power supply leads to the S845WD1-E server board.**
- Do I need a special power supply to support Instantly Available PC (Suspend-to-RAM)? How much +5V standby current does the power supply need to support it?  
A special power supply is not needed to support "Instantly Available PC". However, the power supply must provide enough standby current to support the needs of all wake-capable devices in the system. The more wake-capable devices in the system, the greater the standby current required from the power supply. Intel recommends starting with a power supply capable of providing a minimum of 1.5 Amps (**2.0 Amps recommended**) of +5V standby current. To be sure, total the amount of standby current required by the various components that can wake the system from the STR state. In your calculations, include the components on the Server Board S845WD1-E and on the add-in cards. Make sure the power supply provides at least that amount of standby current. Refer to the Technical Product Specification for information on how much +5V standby current the on-board components of the Server Board S845WD1-E require.

### Jumpers/BIOS Setup Options:

- How should the jumpers be set on my S845WD1-E server board?  
A single configuration jumper (J6H1) on the server board is used to access configuration mode. All configuration options are made available through the BIOS configuration screens. Refer to the System Recovery and Update Jumper page in the S845WD1-E Technical Product Specification (TPS).
- Which fan headers should the processor and chassis fans be plugged into?  
The processor fan should be plugged into the fan header labeled "CPU\_Fan" adjacent to the processor socket. Chassis fans may be plugged into the front and rear chassis fan headers (FAN\_1, FAN2, FAN\_3).

- How do I disable the on-board features?  
On-board features can be disabled through the Server Board S845WD1-E BIOS Setup program. Refer to the S845WD1-E Server Board Technical Product Specification.

#### Video:

- What add-in AGP cards can be used?  
The S845WD1-E AGP socket can accept universal AGP cards that comply with the AGP 2.0 specification. The S845WD1-E can use 1X / 2X / 4X card(s) operating at 1.5V.  
**Note:** Legacy 3.3V AGP cards are not supported.
- How do I designate an add-in PCI video adapter as my primary video adapter?  
The primary video adapter can be changed from the onboard AGP to an add-in PCI adapter through the BIOS Setup program. The setting is located in the Advanced screen under Video Configuration.

#### Input/Output:

- Does the S845WD1-E server board support Ultra ATA/100 hard drives?  
Yes. The server board S845WD1-E supports Ultra ATA transfer rates up to 100 MB/sec (ATA/100). An Ultra ATA/100 supported hard drive and an 80 conductor IDE cable are required to take advantage of the increase bandwidth available on the IDE channel.  
One of the new features of the Intel server board S845WD1-E is its ability to support all Ultra ATA transfer rates (i.e., 33 MB/sec, 66 MB/sec and 100 MB/sec). To realize a true throughput performance difference, a hard drive may need to implement higher spindle speeds, such as 7200 RPM, and a large onboard buffer size to take advantage of the increased bandwidth available on the IDE channel.
- Can I mix Ultra ATA devices with other devices on the same IDE channel?  
If two drives with different Ultra DMA protocols are used on the same cable, the slower Ultra DMA protocol is used for both drives. It is recommended that the Ultra ATA/100 drives be attached to the primary IDE channel using the provided cable and that the other drives be attached to the secondary channel using a good quality, 40-pin 40-conductor IDE cable, which is not provided with the Server board.  
**Note:** Some Ultra DMA cables use a hole in the ribbon cable as a cable detect mechanism to determine if an Ultra DMA IDE or standard IDE cable is installed.
- What type of battery is used in the S845WD1-E server board?  
A 3 volt, (CR2032) coin cell is used to supply power to the Real Time Clock (RTC) when power is not available from the power supply.
- Why does my server board S845WD1-E system fail to boot?  
The server board S845WD1-E has specific requirements for the power sequencing and limits. A momentary switch should be used for the power on/off switch. The power supply chosen must have the additional 4-pin +12 volt connector. If the power supply 2-by-2 (or 2-by-4) connector is not plugged into the board connector located near the processor socket, the system will not boot.
- How do I disable the onboard LAN?  
Onboard LAN can be disabled through the Server board BIOS Setup program. The setting is located in the Advanced screen under Peripheral Configuration. Refer to the S845WD1-E

Server Board Technical Product Specification (TPS) for more details.

- Does the S845WD1-E server board support two serial ports?  
Yes, the S845WD1-E server board has two serial port connectors. Serial port A is located on the back panel. Serial port B is accessible using a connector located near the main power connector.
- Why isn't my IDE device displayed during power-up POST?  
All IDE devices must be ATA4 compliant. IDE devices not selected as auto-detect in the BIOS setup are not displayed as part of the POST tests.
- Can I use a second floppy disk drive on my S845WD1-E Server board?  
No. The S845WD1-E Server board uses a SMSC LPC47M142 SIO component to support the floppy-disk controller. This component and equivalent components can support a single standard legacy type FDD, a 2.88 MB Super I/O type FDD, or a three-mode type FDD.
- What features are incorporated into the S845WD1-E Server board?  
The Server Board S845WD1-E offers Double Data Rate (DDR) SDRAM 200/266 MHz support for Pentium® 4 processors utilizing the Intel® NetBurst™ micro-architecture including 400-MHz system bus. The Server Board S845WD1-E has six PCI slots, integrated AC'97 Audio with SoundMAX\* with SPX and Instantly Available PC (Suspend-to-RAM). In addition to these standard features, the Server Board S845WD1-E comes with dual integrated Intel® Server NICs.  
The S845WD1-E Server board allows use of an AGP 4X adapter card (that must comply with the AGP 2.0 specification) operating at 1.5V. The S845WD1-E supports Ultra ATA/100 hard disk drives. The S845WD1-E has an additional USB controller that provides up to 7 USB connections. Boards that have six or seven USB ports have four back panel connectors (two dual-stacked connectors); Boards with four USB ports have one set of stacked back panel connectors. The remaining two USB ports are accessible via the front panel USB header.

### **Instantly Available PC and Power Supplies:**

- What is Instantly Available PC?  
Instantly Available PC, also known as Suspend-to-RAM (STR), is a technology closely associated with the S3 state of the ACPI specification. STR allows a properly configured system to go into a low-power mode, saving open applications, active files and information about the system's configuration to main memory. In this low-power state, memory remains powered to retain the system information, while most other components turn off to conserve energy. Fans are turned off to provide silent operation so the system appears "off." The PC can be left in STR state and awakened periodically to perform such preprogrammed events as downloading e-mail or searching and filtering Web content. An incoming phone call can also wake the PC and trigger a desired response, similar to a telephone answering machine. When an incoming request arrives via a "wake device" or the user wishes to resume operation, the PC comes alive within a few seconds by reconfiguring itself based on the information previously saved to memory. No boot is required.
- What is a wake device?

A wake device is a mechanism that awakens the system from the STR state. Typically, this mechanism is a network card or a fax/modem that is compliant with the PCI 2.2 specification. When the system goes into the STR state, these wake devices receive standby current from the power supply. Although these devices are in a low-power state they have sufficient current to remain awake to recognize incoming activity, such as a network request or a phone call.

#### Power Supply:

- What kind of Power Supply is needed for the Intel® Server Board S845WD1-E?  
The server board S845WD1-E requires an **ATX12V** or EPS12V compliant power supply to function according to server specifications.

## Jumpers and BIOS Setup Options

1) **Why can't I find speed settings in my BIOS configuration mode?**

The processor speed option previously available in configuration mode is not displayed with newer Intel® processors and will not affect the processor speed. Newer Intel processors boot with the frequency speed preset and are tested during manufacturing.

2) **How should the jumpers be set on Intel Server Board S845WD1-E?**

A single configuration jumper on Server Board S845WD1-E is used to access BIOS configuration mode. All configuration options are made available through the BIOS configuration screens. Refer to the Technical Product Specification for more information on configuration jumper settings.

## Input/Output

1) **Does the Intel Server Board S845WD1-E support Ultra ATA/100/66 hard drives?**

Yes. One of the features of the Intel Server Board S845WD1-E is its ability to support all Ultra ATA transfer rates (i.e., 66 MB/sec and 100 MB/sec). To take advantage of the increased bandwidth available on the IDE channels, a hard drive that implements higher spindle speeds and a large onboard buffer size may be required.

2) **What IDE cable should I use to support both Ultra ATA/100 and previous IDE transfer protocols?**

A 40-pin, 80-conductor cable can be used with Server Board S845WD1-E and is fully backward compatible with all IDE transfer protocols. It will also support Ultra ATA/100 if used with one or two Ultra ATA/100 drives attached.

3) **Can I mix Ultra ATA devices with other devices on the same IDE channel?**

Yes. However, for better performance we recommend that the Ultra ATA capable devices be attached to their own IDE channel separate from other non-Ultra ATA capable drives.

If you must contact customer support, please fill out the following support form and have it ready.

## Intel Server Issue Report

Please Complete All That Apply

Company Name: \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Contact: \_\_\_\_\_

Email Address: \_\_\_\_\_

Telephone #: \_\_\_\_\_

Priority: \_\_\_\_\_

(1-Hot, 2-Critical, 3-High, 4-Low)

### Intel Baseboard Product:

- STL2                      • SBT2                      • S845WD1-E              • SAI2                      • SJP2                      • SDS2
- SCB2                      • SKA4                      • SRPL8                      • SRPM8                      • OPRF100                  • S815EBM1
- Other (specify) \_\_\_\_\_

### Chassis:

- SC7000                  • SR4000                  • SC5000                  • SC5100                  • SC5150
- SR1200                  • SR2000                  • SR2050                  • SR2100                  • SR2200

- Other (specify chassis manufacturer & part number, power supply manufacturer & part number, type & amount of chassis fans used, fan manufacturers & part numbers) \_\_\_\_\_

**Problem Description** (complete details of the problem setup, problem description, error messages, recreation steps, troubleshooting steps completed, etc.)

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### Server System Configuration Information (\* indicates required information)

#### Hardware Information

\* Main Board Part Number (PBA#/AA#) \_\_\_\_\_

\* System BIOS Version \_\_\_\_\_

\* CPU Board Part Number (PBA#/AA#) \_\_\_\_\_

\* I/O Board Part Number (PBA#/AA#) \_\_\_\_\_

\* Front Panel Board PNumber (PBA#/AA#) \_\_\_\_\_

\* Midplane Board Part Number (PBA#/AA#) \_\_\_\_\_

\* Mezzanine Board PNumber (PBA#/AA#) \_\_\_\_\_

\* I/O Riser Board Part Number (PBA#/AA#) \_\_\_\_\_

\* System BMC Firmware Version \_\_\_\_\_

\* SCSI Backplane PBA#/HSC Firmware Version \_\_\_\_\_

\* System FPC Firmware Version \_\_\_\_\_

\* SMIC Firmware Version \_\_\_\_\_

\* Power Share/Dist. Board PBA# \_\_\_\_\_

\* Chipset Stepping \_\_\_\_\_

\*Processor #1 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 #2 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 S-Spec# Speed Stepping Cache size CUID#

\*Processor  
 S-Spec# Speed Stepping Cache size

\*Processor #3 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 #4 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 S-Spec# Speed Stepping Cache size CUID#

\*Processor  
 S-Spec# Speed Stepping Cache size

\*Processor #5 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 #6 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 S-Spec# Speed Stepping Cache size CUID#

\*Processor  
 S-Spec# Speed Stepping Cache size

\*Processor #7 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 #8 \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 S-Spec# Speed Stepping Cache size CUID#

\*Processor  
 S-Spec# Speed Stepping Cache size

**\*Memory module configuration  
 (On board or in Card 1)**

J1 \_\_\_\_\_ MB (MODULE#1)  
 J2 \_\_\_\_\_ MB (MODULE#2)  
 J3 \_\_\_\_\_ MB (MODULE#3)  
 J4 \_\_\_\_\_ MB (MODULE#4)  
 J5 \_\_\_\_\_ MB (MODULE#5)  
 J6 \_\_\_\_\_ MB (MODULE#6)  
 J7 \_\_\_\_\_ MB (MODULE#7)  
 J8 \_\_\_\_\_ MB (MODULE#8)  
 J9 \_\_\_\_\_ MB (MODULE#9)  
 J10 \_\_\_\_\_ MB (MODULE#10)  
 J11 \_\_\_\_\_ MB (MODULE#11)  
 J12 \_\_\_\_\_ MB (MODULE#12)  
 J13 \_\_\_\_\_ MB (MODULE#13)  
 J14 \_\_\_\_\_ MB (MODULE#14)  
 J15 \_\_\_\_\_ MB (MODULE#15)  
 J16 \_\_\_\_\_ MB (MODULE#16)

**\* Module Type (module vendor/vendor part numbers/ Intel part numbers):**

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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**\*Memory module configuration  
 (In Card 2)**

J1 \_\_\_\_\_ MB (MODULE#1)  
 J2 \_\_\_\_\_ MB (MODULE#2)  
 J3 \_\_\_\_\_ MB (MODULE#3)  
 J4 \_\_\_\_\_ MB (MODULE#4)  
 J5 \_\_\_\_\_ MB (MODULE#5)  
 J6 \_\_\_\_\_ MB (MODULE#6)  
 J7 \_\_\_\_\_ MB (MODULE#7)  
 J8 \_\_\_\_\_ MB (MODULE#8)  
 J9 \_\_\_\_\_ MB (MODULE#9)  
 J10 \_\_\_\_\_ MB (MODULE#10)  
 J11 \_\_\_\_\_ MB (MODULE#11)  
 J12 \_\_\_\_\_ MB (MODULE#12)  
 J13 \_\_\_\_\_ MB (MODULE#13)  
 J14 \_\_\_\_\_ MB (MODULE#14)  
 J15 \_\_\_\_\_ MB (MODULE#15)  
 J16 \_\_\_\_\_ MB (MODULE#16)

**\* Module Type (module vendor/vendor part numbers/ Intel part numbers):**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## O/S Information

\*Operating System \_\_\_\_\_

\*Operating System Language Version \_\_\_\_\_



\*O/S Version \_\_\_\_\_  
\*MP Spec \_\_\_\_\_

\*Service Pack # \_\_\_\_\_

## Utilities Information

\*ISC Version \_\_\_\_\_ \*SSU Version \_\_\_\_\_  
\*EMP / DPC Console Version \_\_\_\_\_ \*FRU/SDR Loader Version \_\_\_\_\_  
\*Diagnostics Version (Testview, PCDiag, etc.) \_\_\_\_\_ Other \_\_\_\_\_

## AGP/PCI/ISA Configuration

### ALLOCATED RESOURCES

### PLUG IN DEVICES

Card Type	Slot#	Card Description	Driver Rev.	IRQ #	I/O Base Addr.	FW Rev#
AGP	AGP	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
PCI	Slot# _____	_____	_____	_____	_____	
ISA	ISA 2	_____	_____	_____	_____	
ISA	ISA 1	_____	_____	_____	_____	

### ONBOARD DEVICE

	<u>IN USE</u>			
*On-Board Video	<input type="checkbox"/>	_____	_____	_____
*On-Board NIC	<input type="checkbox"/>	_____	_____	_____
*On-Board SCSI-1	<input type="checkbox"/>	_____	_____	_____
*On-Board SCSI-2	<input type="checkbox"/>	_____	_____	_____

RAID ☐ RAID Level: \_\_\_\_\_(0-5) Caching Method: \_\_\_\_\_ (RB/WT) # of Drives Used: \_\_\_\_\_

IDE Drive Type(s): \_\_\_\_\_ (Make/Model)

SCSI Drive Type(s): \_\_\_\_\_ (Make/Model)

Other Device Type(s){CD-ROM, Tape Drive, etc.}: \_\_\_\_\_ (Make/Model)